

*Without additional personnel or funds and without appreciably affecting the amount of time spent on other duties, a county health department has established and is now expanding a home safety program based on daily reporting of accident hazards by its field staff.*

## Growth of an Accident Prevention Program

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**A**FTER 2 years of studying and experimenting with integration of home accident prevention activities into the routine duties of the department's field staff, the Jefferson County (Ala.) Department of Health has developed a home safety program that is showing definite signs of progress and merit.

Like many other health departments, the Jefferson County agency for many years has recognized and expressed concern about the problem of accidents. Ever since reliable records have been available in Jefferson County, accidents have appeared among the leading causes of death. Safety has been taught by the public health nurses since the beginning of maternal and child health programs. Accident prevention has been a side result of the general sanitation program, although the activities have not been specifically directed toward that goal. Because of insufficient funds, lack of personnel, and a heavy schedule of other duties, no attempt was made to give special emphasis to accident prevention until 1954.

In 1954 the health department decided to remove accident prevention from the realm of thought and discussion and to develop specific plans for active work in home safety. This decision was made without the prospect of ad-

ditional funds or personnel. In fact, the department was seeking some type of program that could be carried out without much added cost.

Advances in the control of the acute communicable diseases and improvement in maternal and infant mortality rates indicated that greater returns from the field staff's time might be realized if safety instruction were made a part of the home visits. Hospitalization and emergency treatment of patients injured in accidents were increasing an already heavy economic burden of medical care for the community's needy. Discontinuance of the local chapter of the National Safety Council also added impetus to the establishment of a health department accident prevention program. Furthermore, the fact that accidents ranked fifth among the leading causes of death in the county during 1954 definitely pointed to the need for such a program. As shown in table 1, home accidents accounted for more than one-third of all accidental deaths in Jefferson County during the 5-year period 1952-56.

As a first step in creating a plan of action against home accidents, a home accident prevention committee was formed within the health department. The committee was composed of the health officer and the directors of the bureaus of public health nursing, communicable disease, sanitation, vital statistics, and health education. Conferences were subsequently held by the committee with home acci-

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**Table 1. Number of deaths by accident class, Jefferson County, Ala., 1952-56**

Accident class	1952	1953	1954	1955	1956	5-year total	
						Number	Percent
Occupational.....	36	27	29	38	28	158	11.7
Home.....	105	83	93	104	77	462	34.3
Motor vehicle.....	108	106	107	108	119	548	40.7
Other public.....	44	35	25	24	51	179	13.3
Total.....	293	251	254	274	275	1,347	100.0

dent prevention specialists of the Public Health Service to obtain advice and guidance in establishing a local program.

Familiar questions arose in meetings of the home accident prevention committee. Where do most accidents occur? How do they happen? Who gets hurt? What is the extent of the problem? What seasonal hazards should be given emphasis?

#### **Morbidity Surveys**

To try to answer these questions and to provide data about the nature and extent of non-fatal home accidents in the county two surveys were made in 1954, one in March and the other in June. In addition to collecting data, the surveys were conducted as a means of stimulating interest in home safety among the staff and to provide discussion material for inservice education. The surveys were made also with the idea that the data might be helpful in establishing a baseline for use in measuring indications of progress made in reducing home accidents.

During the survey months every public health nurse, sanitary inspector, and communicable disease officer carried a supply of mimeographed questionnaires. In each home visited they asked whether an accident which disabled the victim for 1 day or more had occurred in the previous month to any member of the household. For each such accident the questionnaire was completed. In every home visited, the name, age, and sex of all household members were recorded to provide a population basis for the study.

It was not considered practicable to visit homes for the sole purpose of making inquiries

regarding home accidents. Generally, therefore, the survey was restricted to the homes that the field staff visited while carrying out their regular duties.

The surveys provided information regarding the accident experience of nearly 48,000 persons living in 10,294 homes. Since the families interviewed included only those visited by the staff in connection with routine health department activities and therefore were not necessarily a representative sample of the county's population, caution was observed in interpreting the results.

The March survey revealed 103 nonfatal home accidents among 24,191 persons. On an annual basis, this means a rate of 55.4 per 1,000 survey population. The 85 home accidents recorded in the June survey gives an annual rate of 42.5 per 1,000 survey population. Falls (39 percent), cutting or piercing injuries (22 percent), and burns (20 percent) were the three principal causes of the accidents, accounting for four-fifths of the injuries reported in the two surveys. Sixty-eight percent, or 128, of the 188 accidents reported in the surveys were in persons under 15 years of age. Only six accidents occurred to individuals 65 years old or over.

No morbidity surveys have been made in Jefferson County since 1954, but the department's accident prevention committee has been considering conducting one in the near future.

#### **Accident Hazard Reporting**

Armed with the information from the survey about the principal causes of accidents and about age and sex differentials, and with a more enlightened staff, the health department began

considering ways to attack the problem of home accidents.

We decided that a daily report on accident hazards observed in each home visited would be the most productive and most practical method of integrating accident prevention into the routine activities of the field personnel. Accident prevention efforts would thus admittedly be limited to that segment of the population visited by the health department personnel for other purposes, but we believed that the procedure would nevertheless serve two important purposes: First, the requirement of a report every day would keep each employee safety conscious and constantly aware of the home accident problem. Second, analysis of the data reported would provide statistical information for evaluation and planning of other measures. Moreover, this type of activity could be carried out without additional staff or travel expense.

A special form for reporting home accident hazards was prepared. On it the public health nurses, the sanitary inspectors, and the communicable disease officers were expected to enter each day the number of hazards observed, the number called to the householder's attention, and the number corrected or eliminated, along with a brief description of the hazard. Also required was the number of persons given in-

struction in home safety. The form, shown below, has been in continuous use since March 1, 1955.

The health department's bureau of vital statistics prepared summaries of the hazards reported during the 10-month period of 1955 and during 1956. Copies of the summaries were distributed to all employees so that they might see and study as a whole the accident problem in the homes visited by the field staff.

The number of home accident hazards observed and the number known to have been eliminated are as follows:

	<i>Observed</i>	<i>Eliminated</i>
1955 (March-December)-----	6, 623	1, 825
1956 -----	9, 874	2, 290
Total-----	16, 497	4, 115

During this period the field staff gave person-to-person home safety instruction to 21,147 individuals. Generally this instruction related to a specific hazard in the home at the time of the visit.

The hazards observed can be classified as:

1. Structural deficiencies potentially dangerous as direct or contributing causes of falls and fire burns. These included defective flues and electric wiring, defective steps, and holes in floor.

2. Poor housekeeping, as revealed by yards

### Home Accident Prevention Supplemental Daily Report

Description*	Number of home accident hazards		
	Observed	Called to attention of householder	Eliminated

\*List hazards, such as unprotected open grate, improper storage of medicine or matches, unanchored rugs, broken glass in yard, unlighted basement steps, etc.

Number of persons given home accident instruction.....

Signed \_\_\_\_\_

Date \_\_\_\_\_

Title \_\_\_\_\_

cluttered with broken glass, nails, and other debris, accumulation of papers and other inflammable materials, and floors littered with objects that might cause falls.

3. Lack of supervision of infants and young children, and of the aged, particularly the physically and mentally handicapped.

4. Unsafe practices of adults, such as smoking in bed, using chairs or boxes instead of stepladder, and starting fires with kerosene.

5. Indifference and neglect on the part of householders in providing a safe environment in and around the home.

The address of the home visited was not indicated on the field report, but a great many of the homes listed as having structural hazards were known to be occupied by persons of low economic status. In view of this situation, the number of structural hazards reported as eliminated was encouraging.

The reports provided strong evidence that parents in many homes failed to supervise the activities of children and to give proper care and attention to infants.

Discussion of the hazards with the householders frequently indicated that they were aware of the deficiencies but that they had neglected to take corrective action. Neglectfulness most often prevailed in homes of the lower income group, who were financially unable to provide proper safeguards. This fact pointed to the need for encouraging householders to improvise with scrap lumber and other available materials such things as fireplace screens and porch and step railings.

The hazards found during 1956 ran the whole gamut of accident-producing situations. The principal hazards, according to the kind of injury likely to result, are listed in the accompanying tabulation, with the total number in each main category and of each type (in parentheses) eliminated.

Hazards were recorded as eliminated if corrections were made during the field worker's visit or if observed to have been corrected on a subsequent routine visit. Except for certain major hazards, visits were not made specifically to determine whether or not recommendations for eliminating hazards were carried out. It is therefore not possible to assess the program in terms of the proportion of hazards actually

## Number of Hazards Eliminated

Falls.....	569
Defective steps or porches (260); no hand-rails or balustrades for porches or steps (21); unanchored throw rugs (16); inadequate light in hall or stairs (10); toys, playthings, other objects on floor or walkways (213); miscellaneous (49).	
Burns.....	313
Unprotected open fireplaces, space heaters (47); inflammable objects too close to heating equipment (13); child playing with matches (38); improper disposition of lighted cigarettes (19); unsafe storage of matches (61); hot liquids in reach of children (54); miscellaneous (81).	
Poisoning.....	179
Improper storage of medicine (104); of poisons and household chemicals (48); of fuel oil (26); miscellaneous (1).	
Electric shock.....	17
Defective wiring, worn cords, improper installation of electric wiring, unsafe use of appliances (17).	
Drowning.....	3
Uncovered wells or cisterns, unprotected fish pool, child playing in tub unattended (3).	
Cuts, lacerations.....	704
Broken glass, tin cans in yard, boards with protruding nails (364); child playing with knives, scissors, other cutting instruments (184); sharp objects in reach of children (41); miscellaneous (115).	
Firearms.....	6
Firearms in reach of children (6).	
Suffocation.....	63
Abandoned refrigerator with latch unremoved (11); infant sleeping with parent (40); too much cover on infant (12).	
Strangulation.....	55
Baby nursing from propped bottle (55).	
Ingestion of foreign body.....	77
Child with pennies, marbles, or other objects in mouth (77).	
Miscellaneous and unclassified.....	304
Total.....	2,290

eliminated. It is reasonable to assume that many more unsafe practices have been corrected and dangerous environmental conditions removed as a result of the safety instruction given than the figures in this paper would indicate.

Neither is it possible to determine the number of injuries prevented and the number of lives saved, but the fact that a substantial number of accident hazards are being removed from Jefferson County homes each month is an indication of the program's value.

Many of the hazards reported as corrected were relatively unimportant and at the worse might have resulted only in minor cuts, lacerations, or injuries of slight severity. However, a number of death-producing hazards, such as abandoned ice boxes, uncovered wells, and improper storage of medicine, poisons, and household chemicals, were also recorded as eliminated.

### **Program Expansion**

The department's accident prevention activities were expanded considerably in 1957. Safety education was accelerated through the use of newspapers, radio, and television. Contacts with various community organizations began to pay dividends as evidenced by an increased interest in home safety and mobilization of efforts to reduce the number of home accidents. The Jefferson County Medical Society, the hospitals in the county, and the health department together formulated plans for an active poison control information center and emergency treatment stations. The fire department and the gas and electric companies agreed to provide inspection services for homes upon the request of the health department.

The accident hazard detection program was extended to meat markets, restaurants, grocery stores, and other food-handling establishments visited by sanitary inspectors. Correction of many unsafe conditions and practices in these places, such as improper use of sterilizers and use of broken ladders in storerooms, were recorded during the first 6 months of 1957. It is also noteworthy that one of the sanitary inspectors was instrumental in having a new fire escape installed at a local maternity hospital.

Perhaps the greatest contribution to the accident prevention movement during 1957 was the adoption of a housing code by the city of Birmingham. The new code provides for the immediate correction of existing hazardous conditions as well as for minimum standards for health and safety in all new construction.

Safety features included in the housing code relate to provision of unobstructed and minimum head room for doorways leading outside, installation of railings on unenclosed structures over 3½ feet from the ground, and provision of guard railings on steps containing five risers or more. The new code also states that windows used for ventilation shall have screens; hallways and stairways shall be adequately lighted; and porches and steps shall be so constructed that they will support the normal load expected.

The Birmingham City Commission named the Jefferson County Health Department as the agency for administering the new code and provided a supplemental appropriation for employing additional personnel to carry out its provisions.

Since the adoption of the code, space has been provided on the accident hazard report form for recording addresses where major or special hazards exist, and more intensive followup of the conditions is planned. Significant hazardous conditions are referred to the bureau of communicable disease control for followup and correction. The responsibility was given these staff members because less time is now required for communicable disease control work.

### **Inservice Training**

Training of staff personnel has been carried on in small groups periodically. It has been designed not only to impart information, but to maintain interest in the program. Safety check sheets have been given to staff members for a safety evaluation of their own homes. Group discussions about hazards found during visits and of the accident hazard summaries prepared by the bureau of vital statistics have taken place.

During the training sessions it has been emphasized that changing attitudes and behavior is even more important than eliminating the hazards. The hazards found in homes merely help to create interest in home accidents and to

**Table 2. Home accident fatalities, Jefferson County, Ala., 1925-56**

Years	Number of deaths	Rate per 100,000 population
1925-29 <sup>1</sup> -----	109	27.3
1930-34 <sup>1</sup> -----	81	18.5
1935-39 <sup>1</sup> -----	96	21.3
1940-44 <sup>1</sup> -----	89	18.5
1945-49 <sup>1</sup> -----	95	18.0
1950-54 <sup>1</sup> -----	94	16.2
1955 -----	104	17.0
1956 -----	77	12.4

<sup>1</sup> Average for the 5 years.

provide a learning situation. No matter how many hazards are discovered and recorded as eliminated, accidents will continue until individuals accept the need for making their homes hazard-free and until they begin to practice safe ways of doing things.

### Preliminary Evaluation

The forms for reporting accident hazards have served the useful purpose of creating an awareness among the staff of the numerous and complex problems associated with home accidents. In addition they have provided an index of the staff's ability to integrate home safety with their routine duties.

Both the number of home accident fatalities and the death rate for home accidents in the county show a decreasing trend over the past years, as revealed in table 2.

This decline is not assumed to be due alone to the activities of the department, for there have been other agencies, organizations, and groups active in promoting home safety. It is believed, however, that during the period March 1955 to December 1956, the staff's contact with 21,147 individuals in the county, the elimination of at least 4,115 hazards, and the effort to encourage practice of safety has contributed to the downward trend in the lives lost through home accidents.

The amount of staff time devoted to home accident prevention activities in a year's period is estimated to be equal to the time of three full-time employees. The department's home accident prevention committee feels, however, that three full-time persons could not possibly give the wide coverage offered by the entire field staff, or receive the same acceptance in the homes.

The department's home accident prevention program is still largely in the developmental stage, but it represents a serious approach to the problem. In the future, accident prevention activities will have an increasingly prominent place in the plans and objectives of the department.

## Physician Visits During Summer of 1957

The American people visited their physicians during the months of July, August, and September 1957 at a rate of almost five times a year, according to data gathered through household interviews by the U. S. National Health Survey, Public Health Service.

The Survey report, entitled "Preliminary Report on Volume of Physician Visits, United States, July-September 1957" (see announcement on p. 568), points out that although the interviews occurred at a time of the year when people are least likely to call the doctor, respiratory diseases were probably at above-average levels.

Persons living on farms used physicians' services at a rate of 3.6 visits a year, compared with 4.5 for the rural nonfarm population and 5.1 for the urban population. Nine out of ten of the visits were in the physicians' offices.